Review must be out 4-18-86

FORM MR-1
(Revised May 1982)

RECEIVED
MAR 21 1986
DIVISION OF
OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES AND ENERGY
DIVISION OF OIL, GAS AND MINING
4241 State Office Building
Salt Lake City, Utah 84114
Telephone: (801) 533-5771

Recd
A Team 3-31-86

NOTICE OF INTENTION TO COMMENCE MINING OPERATIONS and MINING AND RECLAMATION PLAN

Based on Provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953, General Rules and Regulations and Rules of Practice and Procedures, By Order of the Board of Oil, Gas and Mining.

Mine Name: Longshot Mine Plan Date: 3/18/86

File No.: ACT/019/018 Date Received: _____

Operator: Philip F. & W. Mark Gramlich DOGM Lead Reviewer: _____

Mineral(s) to be Mined: Gold

Please attach other sheets as needed and include cross-reference page numbers when used.

1. Name of Applicant or Company: Philip F. & W. Mark Gramlich
   Corporation ( ) Partnership (X) Individual ( )

2. Address: Permanent: 460 Rosetree Lane Moab, Utah 84532
   Temporary: _____

3. Company Representative: Name: Philip F. Gramlich
   Title: Manager
   Address: 460 Rosetree Lane, Moab Phone: 801-259-7564

4. Location of Operation: County(ies) Grand
   Township(s): 26S. Range(s): 23E. Section(s): 23
   Township(s): _____ Range(s): _____ Section(s): _____
   Township(s): _____ Range(s): _____ Section(s): _____

5. Owner(s) of record of the surface area within the land to be affected:

Name: Don Holyoak-grazing lease Address: La Sal Rt., Moab Utah 84532
Name: _____ Address: _____
Name: _____ Address: _____
Name: _____ Address: _____

6. Owner(s) of record of the minerals to be mined:

Name: Goerge Proctor-mining claim owner Address: Box 451 Panguitch, Utah 84759
Name: _____ Address: _____
Name: _____ Address: _____
Name: _____ Address: _____

7. Owner(s) of record of all other minerals, including oil and gas, within any part of the land to be affected:

Name: No Oil & Gas Lease Address: _____
Name: _____ Address: _____
Name: _____ Address: _____

8. Have the above owners been notified in writing? (X) Yes, ( ) No. If no, why not? I don't have to notify the claim owner, because as Sub-Lessee we can mine anytime. Holyoak notified

9. Have you or any other person, partnership or corporation associated with you received an approval of a Notice of Intention to Commence Mining Operations by the State of Utah for operations other than described herein? ( ) Yes, (X) No. If yes, list all approval numbers now under surety:

_____ _____ _____
_____ _____ _____
_____ _____ _____

10. Source of Operator's legal right to enter and conduct operations on the land to be covered by this Notice: Sub Lease from John D. Adams-Lessee from Goerge Proctor-Owner of the Placer Mining claim.

11. Give the names and mailing addresses of every principal Executive, Office, Partner (or person performing a similar function) of Applicant:

	Name	Title	Address
A.	W. Mark Gramlich	Partner	1007 N. 1725 W. St. Goerge, Utah 84770
B.			
C.			
D.			

12. Has the Applicant, any subsidiary or affiliate or any person, partnership, association, trust or corporation controlled by or under common control with the Applicant, or any person required to be identified by Item 11 ever had an approval of a Notice of Intention to Mine or Explore withdrawn or has surety relating thereto ever been forfeited? ( ) Yes, (X) No.

    If yes, please explain: _____

Please note: Section 40-8-13 of the Act provides that information relating to the location, size or nature of the deposit, and marked confidential by the Operator, shall be protected as confidential information by the Board and the Division and not be a matter of public record in the absence of a written release from the Operator, or until the mining operation has been terminated as provided in Subsection (2) of Section 40-8-21 of the Act. This material should be so marked and included on separate cross-referenced sheets.

13. All maps and plans prepared for submission shall be of adequate scale and detail to show topographic features and clearly indicate the following details:

    A. Location and delineation of the extent of the land previously affected, as well as the proposed surface disturbance.
    B. Existing active or inactive, underground or surface mined areas.
    C. Boundaries of surface properties, including ownership.
    D. Names and locations of:
        (1) Lakes, rivers, streams, creeks and springs.
        (2) Roads, highways and buildings.
        (3) Active or abandoned facilities.
        (4) Transmission lines within 500 feet of the exterior limits of land affected.
        (5) Gas and/or oil pipelines.
        (6) Site elevation.
    E. Drainage patterns of land affected:
        (1) Overburden or topsoil removal and storage areas.
        (2) Areas susceptible to erosion.
        (3) Natural waterways.
        (4) Constructed drainages, diversions, berms and sediment ponds (design calculations shall be included).
        (5) Receiving waters (State Health classification).
        (6) Directional flow of all surface waters (indicated by arrows).
    F. Known drill holes:
        (1) Location.
        (2) Status.

(3) Depths and thicknesses of:*
   a. Water bearing strata.
   b. Mineral deposits.
   c. Toxic or potentially toxic materials.
   d. Surficial or plant supporting material (topsoil and subsoil).

G. Locations of disposal and stockpile areas:
   (1) Topsoil and subsoil storage areas.
   (2) Overburden storage area.
   (3) Waste, tailings, rejected materials.
   (4) Raw ore stockpile(s).
   (5) Tailings-ponds and other sediment control structures.
   (6) Discharge points, water effluents (see #15[D]).

All maps should have a color code or other suitable legend used in preparation to clearly indicate surface features of the land affected. A general reference map completed on a 7.5 (1:24,000) USGS quadrangle sheet is recommended with additional large scale maps included for practical delineation of individual facilites, (e.g., 1:200, 1:500).

14. Acreage to be disturbed:
Ponds and Tailings storage-2 acres, Mining 2½ acres a year-3 years
   A. Minesite (operating, storage, disposal areas, etc.): 8½ acres Total Any new temporary access roads
   B. Access/haul roads/conveyors: will be built within the area of disturbance.
   C. Associated on-site processing facilities: Water gravity Concentrator with 2 small sheds

15. Describe mining method to be employed, including:

   A. Mining sequence:
      (1) Map delineating the yearly sequential disturbance (if surface mine) and/or surficial disturbance.
      (2) Narrative (including on-site processing or mineral treatment): the ponds and Tailings storage area will cover 2 acres. About 2½ acres per year will be mined. Pits will be filled in as we mine and after each acre is mined it will be smoothed out and reseeded. On the W side of the pit a 10' wide loader haulage road will have to be excluded until mining in each area is completed.

      Attach supplemental sheets and/or diagrams as necessary with cross reference to page number here: See Minerals Operating Plan for mining and concentrating details.

*Stratigraphic or lithologic logs if correlated to footage depths may be presented when labeled (maps or logs should be labeled confidential, if so desired).

the material to be mined is a gravel deposit, from 5 to 10 feet thick in most places. It is an ancient stream deposit.

B. If sedimentary deposit seam(s):
(1) Thickness(es):
(2) Dip:
(3) Outcrop:

C. Will any underground workings or aquifers be encountered? ( ) Yes, (X) No. If yes, describe potential impacts and protection measures to be taken:

D. Describe any active discharge or proposed discharge of water from mine or site area. Include water quality data and lab test reports. If attached sheets or reports are included, cross reference to page number here:

the water will be taken from a creek, circulated through a gravity concentrator to wash the gold from the gravel, settled out, and then recirculated. Any overflow will be discharged back to the creek, in as good a condition as before use.

16. Have all necessary water rights been appropriated? (X) Yes, ( ) No. How will water be obtained? Please explain: Water will be bought from the Grand County water conservancy district, with State Engineer approval of water diversion.

17. Proposed or estimated duration of mining operation: 3 years
Will the permit term be for a lesser amount of time, subject to review? (e.g., for surety estimate reasons). (X) Yes, ( ) No. If yes, how long?

18. Describe the construction and maintenance of access roads including:
A. Procedures (drainage and erosion control methods).
B. Cross section(s).
C. Profile(s) of proposed road grade(s).

The Forest Service will require each acre to be reclaimed except for seeding, as we mine, and their bond is figured that way: the seeding will be done each fall before snow.

Present access roads will be repaired and water bars restored. Any other access roads will be in the area of disturbance and will be in conjunction with the mining or testing. They will be reclaimed as the mine area is reclaimed. All test results are unsatisfactory in some areas, the roads will be reseeded and blocked off.

Attach supplemental diagrams and cross reference to page number here: .

19. Prior land use(s): some placer mining, grazing
Current land use(s): grazing only
Possible projected or prospective future land use(s): As the mine area is reclaimed and seeded, grazing will be much better, as tree shade will be illiminated so grass will grow.

20. Describe methods of tree and brush removal: The Pinion and Cedar trees will be cut down, limbed, and cut into 8' lengths with a chain saw. Large limbs will be saved for firewood. The stumps, small limbs, and brush will be piled for burning with Forest Service supervision. The trees will be bought from the Forest Service for firewood.

Provide estimate of, and method of obtaining existing vegetation cover (%): 10% is Cedar + Pinion trees, 1% is Scrub Oak, too shady for anything else. Estimated percentage visually.

What types of dominant vegetation are present? Pinion Pine, and Scrub Cedar trees, scrub-Oak brush, an occasional sagebrush and very little else.

Photographs and/or maps may be attached to these forms, cross reference to page number here: _____.

21. Soils (surficial plant supportive material) and overburden: Except where slope or rocky terrain make it impossible, all surficial materials suitable as a growth medium shall be removed, segregated and stockpiled according to its ability to support vegetation (as determined by soil analysis and/or practial revegetation experience) prior to any major excavation. (Suggested minimum requirements are the top six inches, or the "A" horizon, whichever is larger.)

A PH test is being done by Karl Topper - soil test lab - Utah State University 150-2217

A. What is the pH range of the soil before mining? _____
Name of person or agency and method of determining pH: _____
_____
Attach lab report if available. Cross reference page number here: _____. (attached)

B. Average depth of topsoil and subsoil to be stripped and stockpiled: _____. Calculated volume of soil to be stockpiled: _____.

C. Describe the method for removing and stockpiling topsoil and subsoil, including measures to protect topsoil from wind and water erosion, compaction and pollutants: the topsoil contains Gold values and will be processed with the gravel. The ¼ minus material from the settling pond will be used for top soil to reclaim the mined area.

D. Describe the method for removing and stockpiling overburden. Describe and discuss the acidity or alkalinity (pH) or other characteristics which would affect revegetation: the Forest Service has a prescribed hardy seed mix that grows well in most soils. there should be no problem here. the Botanists prescribed seed mix is in the Forest Service requirements attached.

E. Rock subjected to processing such as waste rock, tailings, etc., and which is to be disposed of on- or off-site must be subjected to a toxicity analysis. The method of determination, results and suitable disposal methods must be explained in detail, including means for containment and long range stability*: This is a simple gravity gravel concentrating operation. The stream that will be the water source, flows through identical gravel material, as will be mining and processing, before diversion. The water will be settled in one pond, then go to a clear water pond, and the overflow from it will go back to the stream.
The same gravel that comes from the mined area will be restored to the mined area. See Mineral operating plan.
No one will be using the water in the stream for at least 15 miles down stream - flows through very rough inaccesible terrain. Also water from high waters, run off (rains & snow melt) drains off the hillsides and runs down the dry washes into the creek, from the areas will be mining. No toxic shales or clays in the gravel.

22. Describe the methods used to minimize public safety and welfare hazards during and after mining operations including:

A. Shaft, tunnel and drill hole closure.
B. Disposal of trash, scrap metal and wood and extraneous debris, waste oil and solvents, unusable buildings and foundations, sewage and other materials incident to mining.
C. Posting of appropriate warning signs and/or fences or berms to act as barriers (e.g., above highwalls) in locations where public access is available.

A. Doesn't apply
B. Garbage + trash buried, waste wood + debris burned, waste oil to the dump, buildings removed & area cleaned up.
C. A gate will be built on the access road into the mining claim, and no trespass signs will be posted. The public will not be allowed on the premises.
The mining and milling areas will be posted no admittance and dangerous.

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*"Toxic" means any chemical or biological or adverse characteristic of the material involved which could reasonably be expected to negatively affect ecological or hydrological systems or could be hazardous to the public safety and welfare.

23. Grading and soil redistribution.

A. Attach pre- and postmining contour cross sections, typical of regrading designs. Cross reference to page number here: _____.

B. Describe the method(s) of overburden replacement and stabilization and highwall elimination, including: (a) slope factors; (b) lift heights; (c) compaction; (d) terracing, etc., (e) also include testing procedures: See Forest Service mining plan for reclaiming the mined areas. 10 yard test pits will be processed from the test pits. If economic values are found, the area will be mined, if not the pits will be sloped to Forest Service specs. and reseeded.
See map no. 3 for terracing

C. What method of spreading topsoil and subsoil or upper horizon material on the regraded area will be employed? Fine minus tailings will be hauled from the fine tailings piles and spread 1' deep or more over the coarse tailings-see Forest Service mining plan

1. Indicate the approximate depth of soil cover after final surfacing 1' or more inches.
2. What tests will be performed to adequately evaluate the potential of the soil to successfully support intended revegetation? I believe the best test is, if the seeds produce good ground cover. The sand area has been previously disturbed and the trees removed, more naturally seeded grass grows there now, than any other place.
3. What soil amendments or fertilizers will be needed as an aid to revegetation? None
   Type: the Forest Service Rate: _____
   Type: doesn't require any. Rate: _____
   Type: _____ Rate: _____
4. What additional surface preparations will be used? Describe (a) drainage, erosion and sediment control measures; (b) maximum slope characteristics; and (c) highwall reclamation.

(a) By hauling the tailings back into the pits, the approx. original contours will be restored in the mined areas. Then reseeding should prevent any erosion.

(b) Where the original contours cannot be restored, the pits will be sloped to Forest Service specifications.
See Map no. 3 for terracing for erosion control after reclamation, for erosion control.

(c) Not applicable

5. Describe methods which may be particularly applicable to waste disposal areas determined to be potential problem areas.

No problem areas

D. Describe plans for either leaving or reclaiming the roads and pads associated with the operation.

See Forest Service Plan

24. Impoundments: All evaporation, tailings and sediment ponds; spoil piles, fills, pads and regraded areas shall be self-draining and nonimpounding when abandoned unless previously approved as an impounding facility by a lawful state or federal agency. In view of this, please describe the reclamation of all related areas in the operation and include pertinent items enumerated in C, 1-5 above.

All ponds, and mining areas will be reclaimed to Forest Service approval, and reseeded.

25. Revegetation plans:

A. What organization, agency or person will specifically be performing the revegetation? Employees of the partnership.

B. Will the affected area be subject to livestock or wildlife grazing? (X) Yes, ( ) No. Will vegetation protection be needed to allow for a determination of the successful revegetation criteria outlined in the Mined Land Reclamation Act, Rule M-10(12)? ( ) Yes, (X) No. If yes, what measures will the operator take?

C. Will irrigation be used? ( ) Yes, (X) No. Type: _____. For how long? _____.

the elevation is 7000 feet high, and there are frequent storms, and winter snow pack to provide sufficient moisture for vegetation.

D. Test plots initiated during the early stages of mine development provide good bases from which a successful revegetation program can be adapted for later implementation. Will test plots be employed? ( ) Yes, (X) No. If yes, describe on an additional sheet(s) and attach. Cross reference page number here and show location on facilities map: _____.

E. Please attach a revegetation plan and schedule including: see page (1)
1. Species to be used. see page (5)
2. Rate of seed application/acre.
3. Season to be planted.
4. Seedbed preparation techniques.
5. Planting location, slope face direction, variability, method of application, covering, etc.
6. Mulch and fertilizer application, if used.

F. Describe any other maintenance procedures which may be used, if needed, to guarantee successful revegetation:

26. Please provide a reclamation schedule including: see page (3)

A. Estimated time for construction.
B. Estimated time for interim reclamation.
C. Estimated duration of the mining operation.
D. A time table for the accomplishment of each major step in the reclamation plans. Attach the schedule and cross reference to the page number here: _____.

27. A surety guarantee must be provided for the mining operation (see Rule M-5 Mined Land Reclamation Act). In calculating this amount, the Division will consider the following major steps based on the information provided in this report: see page (3)

A. Clean up and removal of structures.
B. Backfilling, grading and contouring.
C. Topsoil and subsoil redistribution and stabilization.
D. Revegetation (i.e., preparation, seeding, mulching, irrigation).
E. Labor.
F. Safety and fencing.
G. Monitoring, and reseeding if necessary.

The Forest Service Bond will be $1800.00

To assist the Division, the operator may attach a list of costs and factors which would satisfy these areas. Substantiation of these factors, i.e., unit costs and how they are derived, should accompany the list. Cross reference the page number here: _____.

28. A request for a variance from specific commitments to Rule M-10 (Reclamation Standards) of the Mined Land Reclamation Act may be submitted with adequate written justification. If after presentation of information adequately detailing the situation, a determination is made that finds a portion of the rule inapplicable, a variance may be granted by the Division.

I hereby commit the applicant to comply with Rule M-10, "Reclamation Standards" in its entirety, as adopted by the Board of Oil, Gas and Mining on March 22, 1978.

The applicant will achieve the reclamation standards for the following categories as outlined in Rule M-10 on all areas of land affected by this mine, unless a variance is granted in writing by the Division.

Rule	Category of Commitment	Variance Requested?
M-10(1)	Land Use	
M-10(2)	Public Safety and Welfare	
M-10(3)	Impoundments	
M-10(4)	Slopes	
M-10(5)	Highwalls	no highwalls
M-10(6)	Toxic Materials	soil not toxic
M-10(7)	Roads and Pads	
M-10(8)	Drainages	
M-10(9)	Structures and Equipment	
M-10(10)	Shafts and Portals	there will be none
M-10(11)	Sediment Control	
M-10(12)	Revegetation	
M-10(13)	Dams	
M-10(14)	Soils	yes, see no 23 / 5/9/86

I believe a variance is justified on a site-specific basis for the previous subsections of Rule M-10 as indicated. A narrative statement explaining these concerns is attached.

STATE OF Utah

COUNTY OF Grand

I, Philip F. Gramlich, having been duly ~~sworn~~ affirmed depose and attest that all of the representations contained in the foregoing application are true to the best of my knowledge; that I am authorized to complete and file this application on behalf of the Applicant and this application has been executed as required by law.

Signed: Philip F. Gramlich

Taken, subscribed and ~~sworn~~ affirmed to before me the undersigned authority in my said county, this 19th day of March, 1986.

Notary Public: Helen G. Davis

My Commission Expires: 12-12-89

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides for maintenance of confidentiality concerning certain portions of this report. Please check to see that any information desired to be held confidential is so labeled and included on separate sheets or maps.

Only information relating to the location, size or nature of the deposit may be protected as confidential.

Confidential Information Enclosed: ( ) Yes ( ) No

SOIL TEST REPORT
and
FERTILIZER RECOMMENDATIONS

SOIL TESTING LABORATORY
Utah State University UMC 48
Logan, Utah 84322
(801) 750-2217

Date 3-17-86

Name PHILIP R. GRAMLICH

Street 460 ROSETREE

City, State MOAB , UTAH 84532
ZIP

	SAMPLE IDENT.	CROP TO BE GROWN	SOIL TEXTURE	LAB NO.
1)	1		SI LOAM	223
2)				
3)				
4)				

Copy sent to Extension office in GRAND County.

SOIL TEST RESULTS		Very Low	Low	Adequate/Normal	High	Very High	RECOMMENDATIONS	Notes
NITRATE-NITROGEN N ppm	1) 2) 3) 4)	N recommendations are based on your crop and fert. history. A valid test for N requires special sampling procedures.					~~90-110~~ N lbs/A	a
PHOSPHORUS P ppm	1) 7.4 2) 3) 4)	********					50-70 P_2O_5* lbs/A	b
POTASSIUM K ppm	1) 82 2) 3) 4)	**********					15-65 K_2O* lbs/A	b
SALINITY EC_e mmhos/cm	1) .5 2) 3) 4)	**********						
pH	1) 6.1 2) 3) 4)	**********						
LIME	1) 0 2) 3) 4)	******						
	))							
	))							

NOTES:

Recommendations are only general w/out crop.

* P_2O_5 x .45 = P K_2O x .82 = K

a. See Note 4 on reverse.

b. See Note 6 on reverse.

P, K, & texture estimate is courtesy of our Lab. We mistakenly ran these elements at no extra cost.

K. Topper

You may need to modify these recommendations in order to achieve maximum economic return under your specific conditions of weather, finances and management.

8/83

1. There is no indication that N fertilizer will increase yield or quality of alfalfa. If grain is to be seeded with new alfalfa, do not apply more than 50 lbs N/acre.

2. **Pasture and Meadows** Split N applications help to maintain yield and protein content throughout the season. Half of the year's application can be done in the fall if it is watered in immediately or injected directly into the sod (early spring application is also effective). The second half can be broadcast after the first cutting in the spring just before irrigating. Do not apply more than 75 lbs. of N at one time. See also Note 4 below.

   Mixed legume-grass pastures containing more than 1/3 legume may not benefit from added N.

3. A valid N test requires sampling at least 0-1 **and** 1-2 feet, and quick drying of the sample (see sampling instructions). If your sample did not meet these requirements, the nitrate-N value reported was not used in our recommendations unless it was unusually high. You may multiply ppm N by 4 to estimate pounds of N in 1 acre-foot of soil as tested.

4. Fertilizer N can be lost through leaching under conditions of excess irrigation or rainfall. Its management is therefore of special importance. In cases of high N rates, sandy soils, or long-season crops, split applications will increase plant use of the fertilizer N, avoid late season deficiency, and reduce leaching losses. For annual crops, split applications of N also offer the opportunity to adjust the rate during the season according to the yield prospect.

   Fall application of N is feasible on medium to heavy soils in areas of low to moderate rainfall.

5. **Potatoes** For potatoes, apply 1/3 of N preplant, the rest during the growing season. Follow petiole N. Avoid high N late in the season. See also Note 4 above.

6. **Phosphorus (P) and Potassium (K)** Plowdown or band applications are preferred for all new seedings. For established perennial crops such as alfalfa and pasture, broadcast recommended fertilizer at earliest possible date.

   Subsoil P and K levels can affect crop responses to fertilizer P or K.

7. Your soil sample is low or marginal in available potassium (K). the amount of K supplied by the irrigation water can thus be important. Mountain streams near their sources, and some city water supplies and wells are low in K. Several major Utah irrigation waters carry enough K to supply crop needs.

8. **Dryland Production** Response to fertilizer on drylands is highly dependent on available moisture. Fall applications are usually most effective.

   Phosphate must be incorporated into the soil by tillage or drilled with the seed.

   Nitrogen applied broadcast prior to planting should be incorporated by tillage as soon as possible.

   Spring applications of nitrogen can be made on unfrozen soil in March or early April, when the probability of rain is highest.

   In years of exceptionally good soil moisture, apply the highest amount of N within the range given. In average years, amounts toward the middle of the range are preferred. If winter precipitation has been unusually high, additional N should be applied in the spring.

9. **Micronutrients** Utah soils are generally well supplied with micronutrients. "Shotgun" applications of mixtures containing boron, manganese, iron and copper "for insurance" have not been shown to be effective and are not suggested.

   Zinc deficiencies have been identified in sensitive crops in some areas. Excessive phosphorus may induce zinc deficiency.

   If soil zinc is Very Low, apply 10 lbs. of zinc per acre; if Low, apply 5 lbs per acre, all preplant.

   In-season zinc deficiency may be corrected by spraying the crop with zinc sulfate solution. Consult qualified dealers for details of application methods and rates.

   Occurence of **iron** deficiency is primarily related to crop variety (root stock for orchards and vines). **Soil tests for predicting iron availability have not yet proved to be reliable.**
   Iron deficiencies occur most often in wet soils high in lime. Excessive P or overwatering may aggravate the problem. Heavy applications of manure can cause iron deficiency in sensitive plants.

   Soil application of inorganic iron compounds such as iron sulfate is not effective in Utah soils. Iron chelates vary in effectiveness, Fe EDDHA or Fe 138 being the best tested so far. Plant deficiencies may be corrected by spraying foliage with iron sulfate solution, repeating as necessary if symptoms persist. Consult specialists for details of methods and rates.

10a. This sample shows a slight to moderate accumulation of salt, sufficient to affect growth of sensitive crops. If subsoil drainage is adequate, applying an excess of good quality water can reduce salts to an acceptable level. If pH is also HIGH, special treatmemt may be needed to reduce sodium.

10b. This sample shows a high accumulation of salt, toxic to many crops. It is also high in sodium and will require special treatment before fertilizers are applied. Seek qualified assistance.

11. The standard soil sample depth is from surface down to 12 inches (see instructions on back of Sample Description sheet) If your sample depth was much different from this, test results may be misleading.

USU Policy It is the policy of the USU Soil Testing Laboratory to recommend only those nutrients that offer a reasonable possibility of increasing the economic return for your crops, and in those amounts that should be necessary to achieve your yield capability. Ranges of nutrients are given, to permit farm operator judgment.

(1.)

25. Revegetation plans -

E.

1. Attached is the Forest Service Botanists presribed seed mix for the area.

2. 11½ pounds per acre

3. the Forest Service requires the planting to be done in the fall just before the first snowfall.

4. After the ground has been restored to approx. the original contours, it with scorified with the loader bucket teeth to soften it for planting.

5. As mining proceeds N E in the area of disturbance, each acre will be reclaimed and planted. the slopes will be terraced where necessary to prevent erosion.

the seeds will be planted with a hand held whirling type planter, then covered by hand raking.

F. No one will be allowed on the planted areas.

(2) f. The existing access road will be waterbarred to stabilize the road surface.

Forest Service Seed mix

g. The seed mix to be used in reclamation is, as follows:

Crested wheatgrass	Agropyron	cristatum	2 lbs / acre
Intermediate wheatgrass	Agropyron	intermedium	2 lbs / acre
Pubescent wheatgrass	Agropyron	pubescens	1 lbs / acre
Five bunch wheatgrass	Agropyron	spicatum	1 lbs / acre
Blue stan wheatgrass	Agropyron	smithii	1 lbs / acre
Smooth Brome grass	Bromus	inermis	1 lbs / acre
Orchard grass	Dactylis	glomerata	1 lbs / acre
Four winged salt brush	Atriplex	canescens	1 lbs / acre
Bitterbrush	Purshia	tridentata	1/2 lbs / acre
Ladak alfalfa	Medicago	ladak	1/2 lbs / acre
Yellow Sweet clover	Melilotus	officinalis	1/2 lbs / acre
			11 1/2 lbs / acre

(3)

26. Reclamation schedule

A. Estimated time for moving in equipment and setting up is 2 weeks.

B. The Forest Requires and will see to it, that after each acre is mined it will be reclaimed, each fall reseeded. So at no time will more than 3 acres, including ponds, & tailing area, be disturbed. Each year approx. 2½ acres will be reclaimed.

C. 3 years

D. See section B.

27.

A. 2 days for 2 men and a truck $300.

B.&C. Backfilling, grading, and topsoil work will be done as we mine, so only the ponds and tailings storage area, will need to be reclaimed at the end of the project. a 6 cat dozer for 10 hours @ $65.00 will accomplish this. $650.

D.&E. Scorifing with a front end loader bucket teeth - 3 hours @ $40.00 an hour = $120.00

23 pounds of seed @ 80¢ per lb. = $18.40

Labor for seeding and covering the seed, 2 men for 2 days = 32 hours @ $7.00 per hour = $224.

$362.40

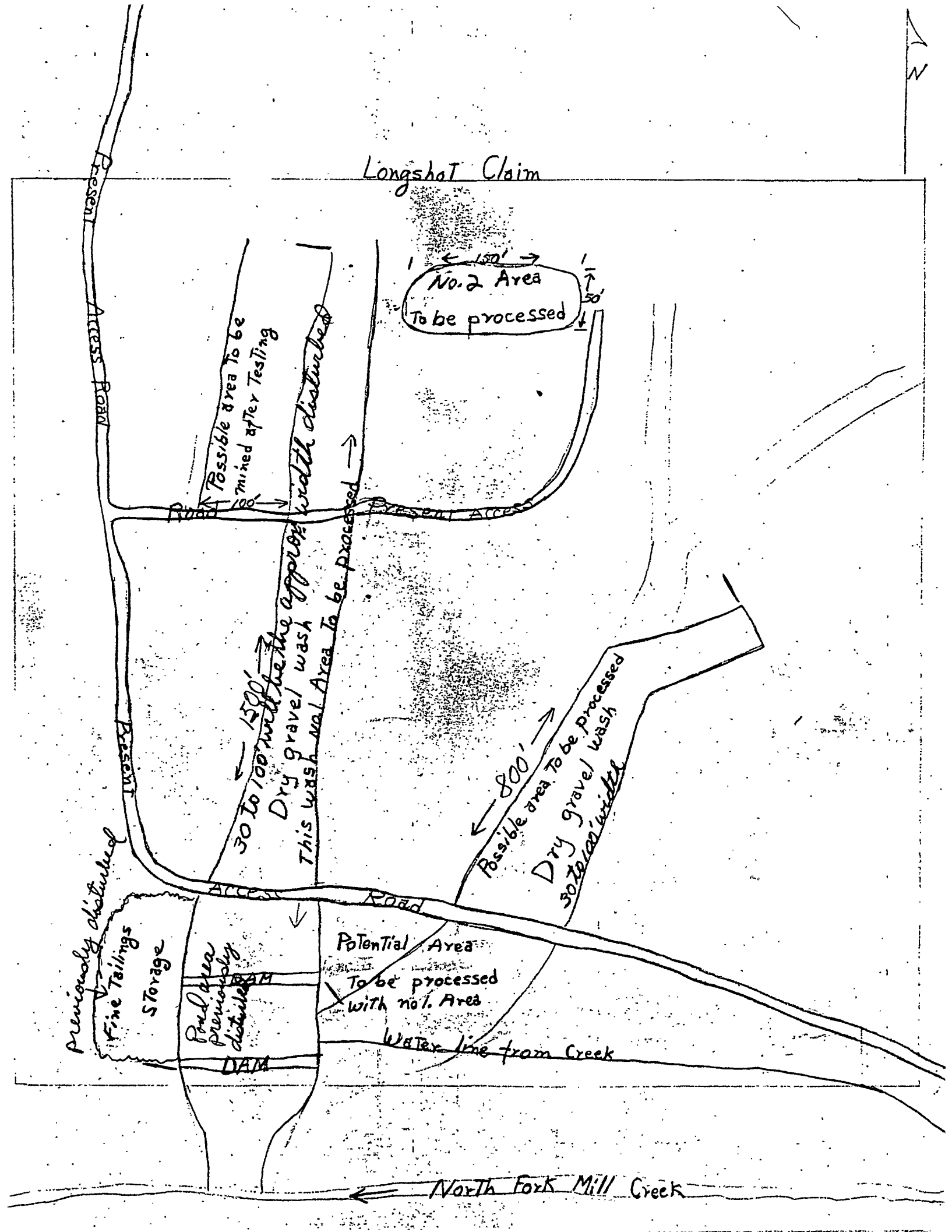
$1312.40

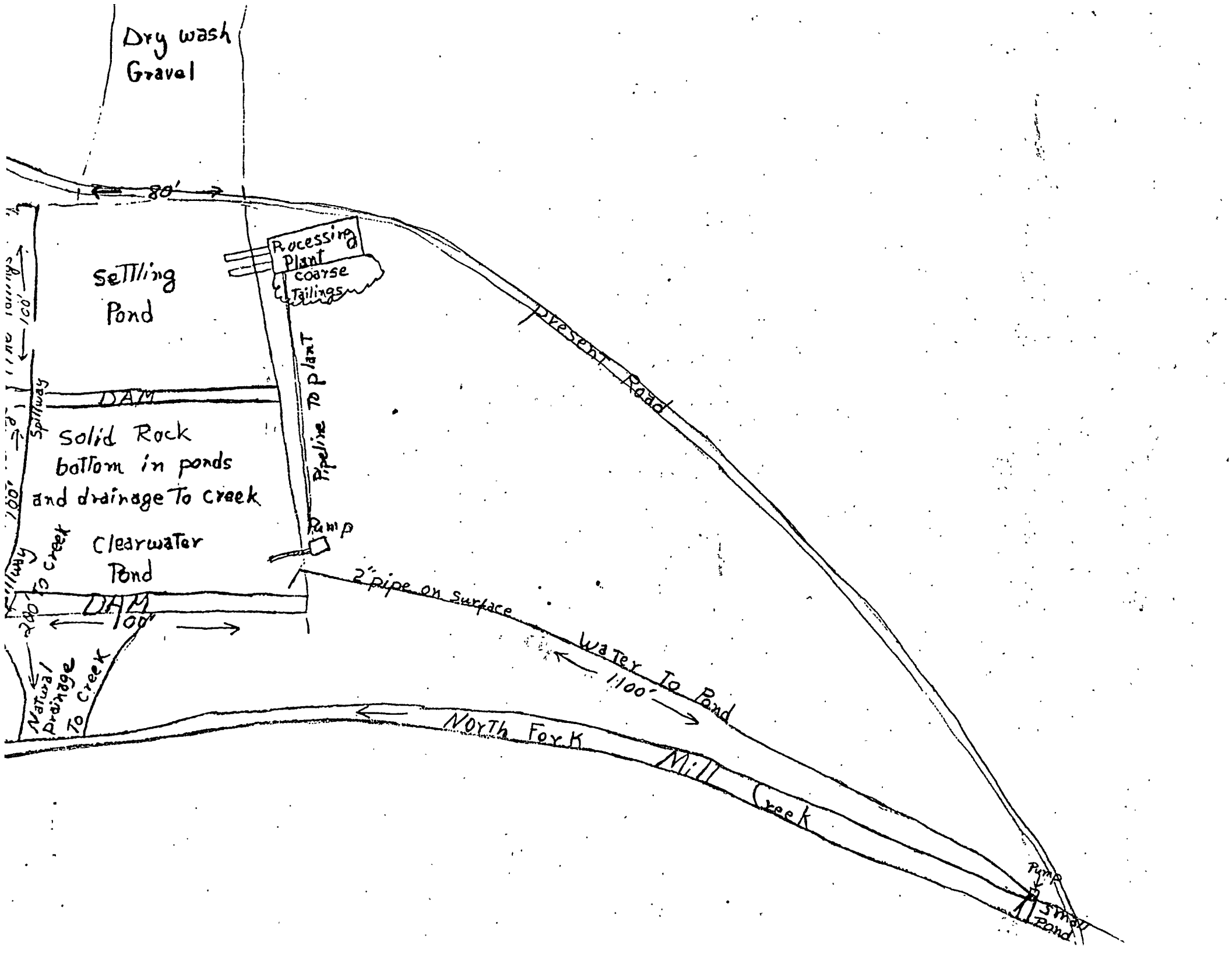
450.

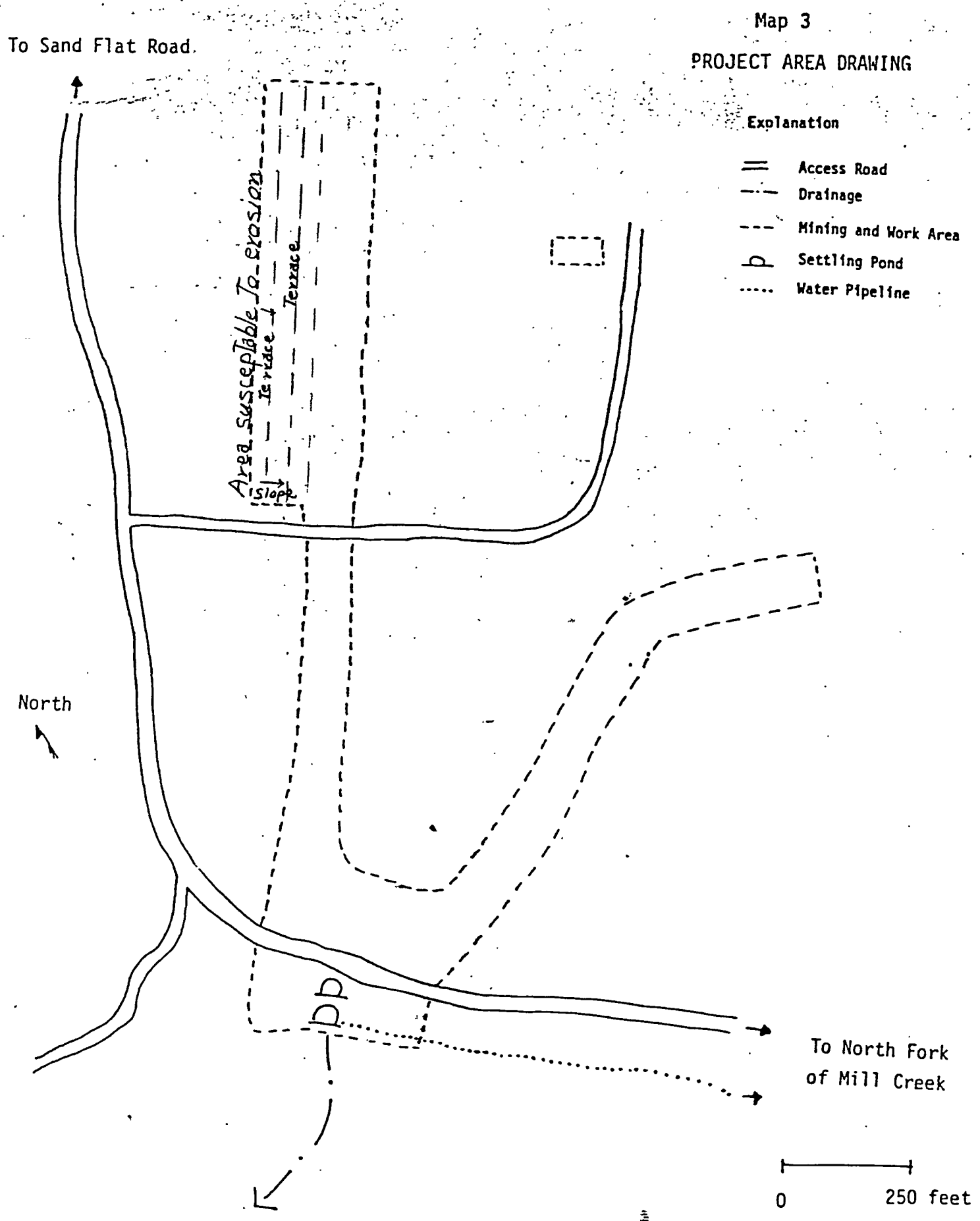
$1762.40

G. Monitoring and reseeding

F. not applicable to this operation.

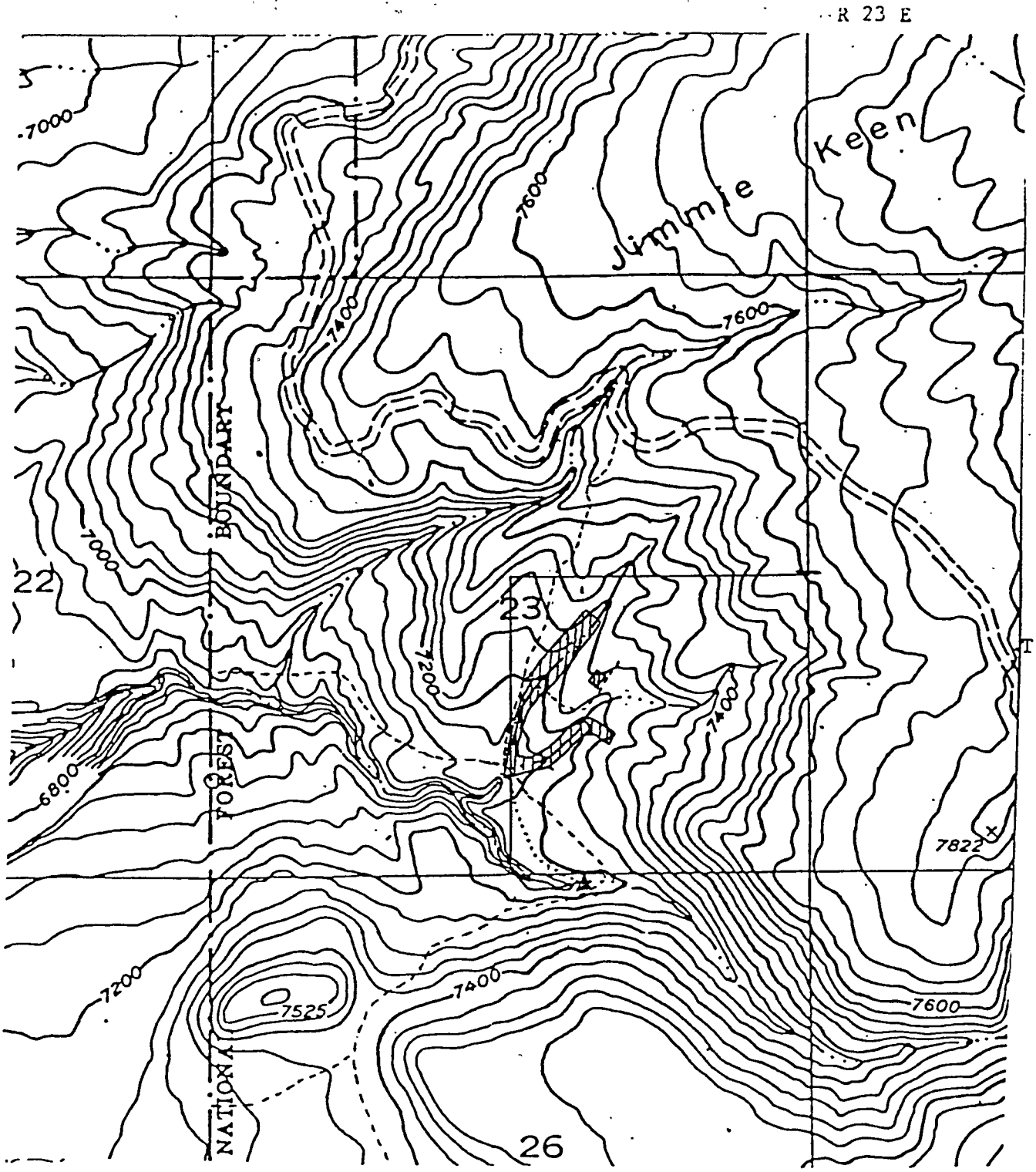

Longshot Claim
N
Present Access Road
Possible area to be mined after Testing
100'
Road
Present Access
150'
No. 2 Area
To be processed
150'
50'
1500'
30 to 100' width of the approx
Dry gravel wash
This wash will be processed
800'
Possible area to be processed
Dry gravel wash
30 to 60' width
Present Access Road
previously disturbed
Fine Tailings Storage
Pond area previously disturbed
DAM
DAM
Potential Area
To be processed
with no 1. Area
Water line from Creek
North Fork Mill Creek


Dry wash
Gravel
80'
Settling
Pond
Processing
Plant
coarse
Tailings
Present Road
Pipeline to plant
DAM
Spillway
Solid Rock
bottom in ponds
and drainage To creek
Clearwater
Pond
Pump
2" pipe on surface
Water To Pond
1100'
DAM
100'
Natural
Drainage
To Creek
North Fork
Mill
Creek
Pump
Small
Pond


Map 3
PROJECT AREA DRAWING
To Sand Flat Road.
Explanation
Access Road
Drainage
Mining and Work Area
Settling Pond
Water Pipeline
Area Susceptable To Erosion
Terrace
Terrace
Slope
North
To North Fork
of Mill Creek
0
250 feet

Map 4

MT. WAAS 3 SE. UTAH



EXPLANATION

North

Contour Interval 40 Feet

Scale 1:1320

0 ¼ Mile ½ Mile

Proposed Project Area

Access Road

Point of Diversion

Overland Pipeline

Long Shot Claim Boundary

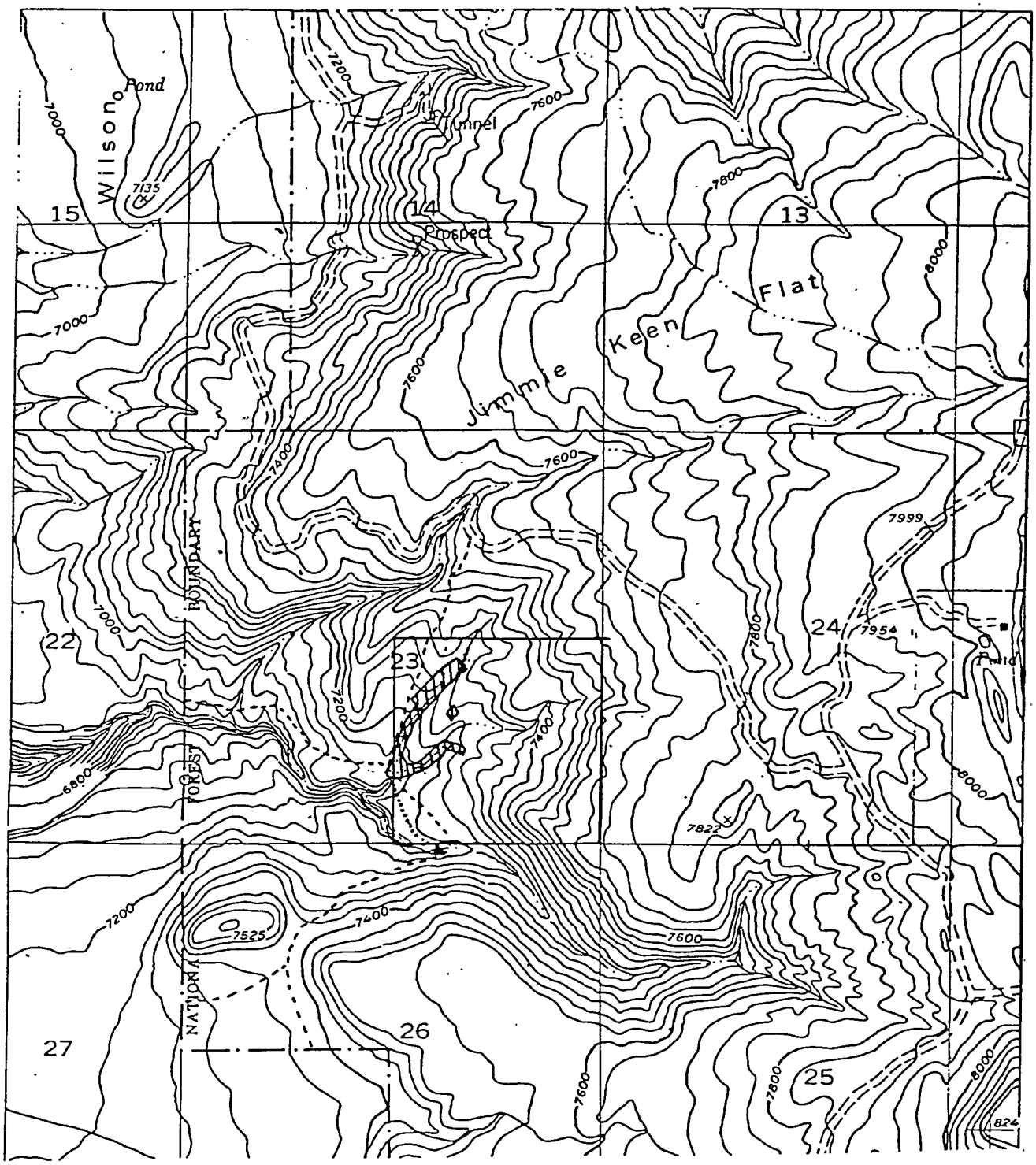
Map 2

MT. WAAS 3 SE, UTAH

R 23 E

T 26 S

T 26 S



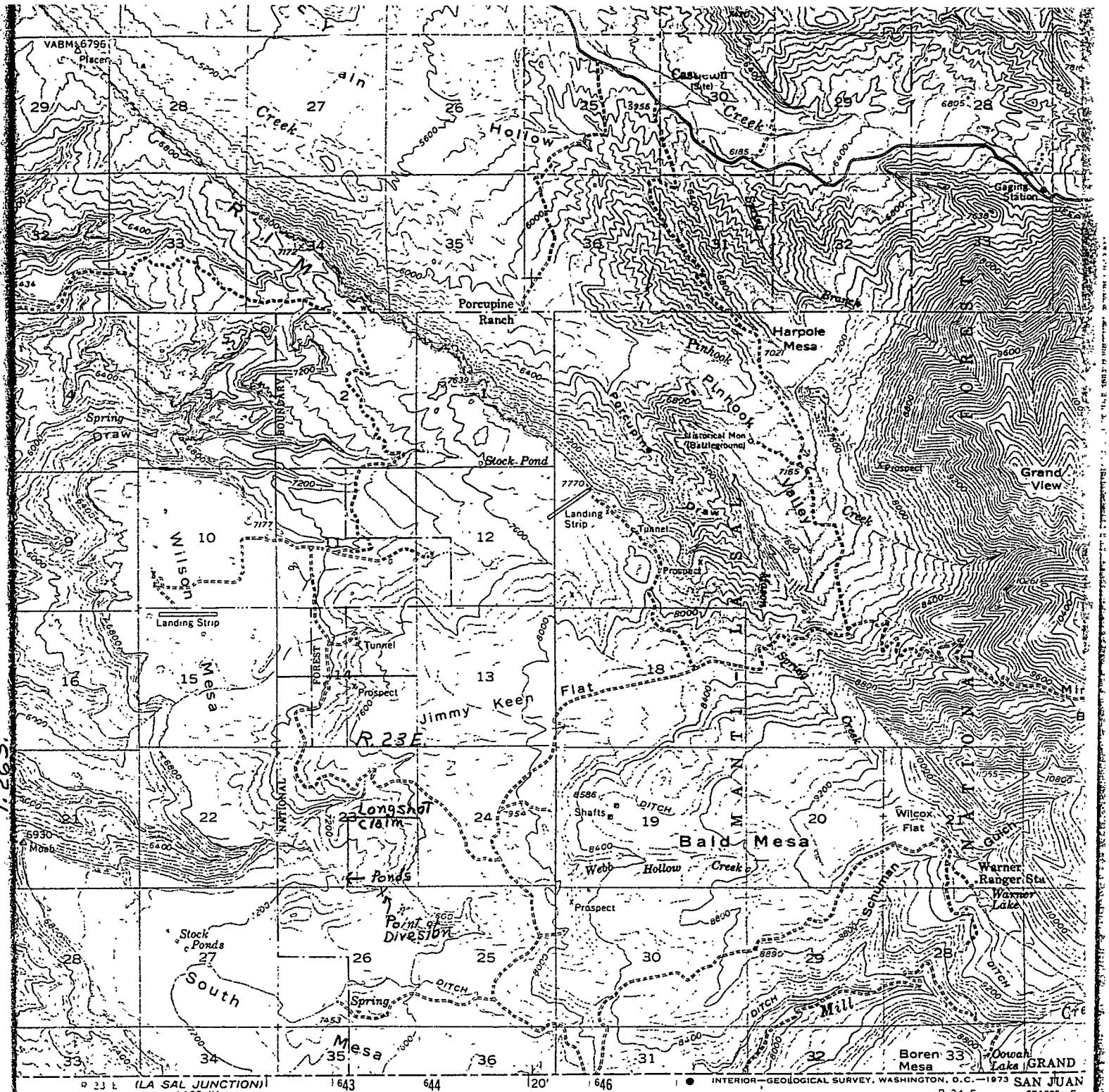
EXPLANATION

North

Scale 1:24000

Contour Interval 40 Feet

- Proposed Project Area
- Access Road
- Point of Diversion
- Overland Pipeline
- Long Shot Claim Boundary



INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1973

SCALE 1:62500

1 2 3 4 MILES

3000 6000 9000 12000 15000 18000 21000 FEET

0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 80 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Medium-duty ——— Light-duty - - -

Unimproved dirt .....

U. S. Route ◯ State R

UTAH

QUADRANGLE LOCATION

CASTLE VALLE

N3830—W1091

1954

AMS 4161 III—SERIE

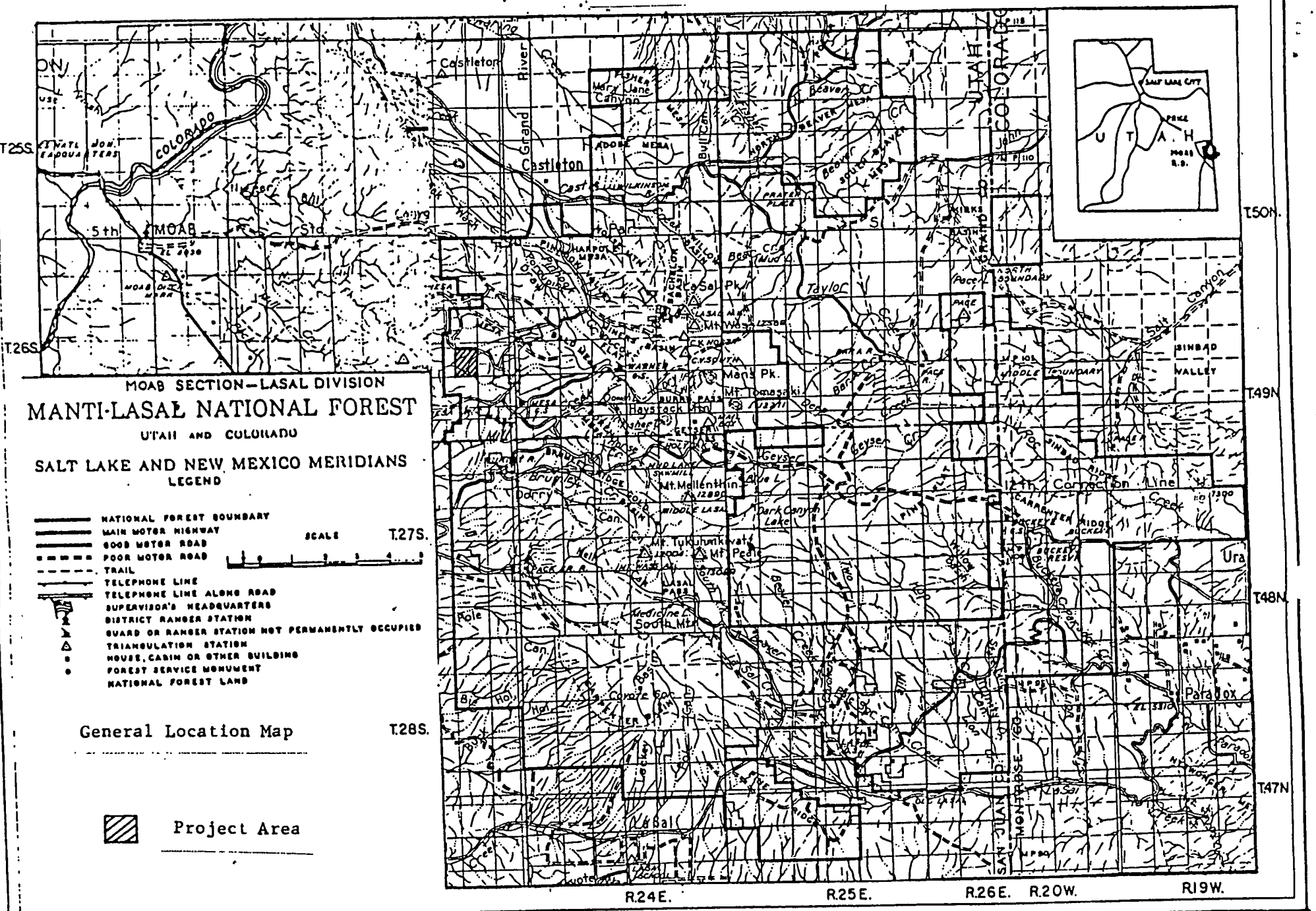
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

GEOLOGICAL SURVEY, DENVER, COLORADO 80225 OR WASHINGTON, D. C. 20242

R DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Map 1

Salt Lake Meridian New Mexico Principal Meridian



MOAB SECTION—LASAL DIVISION

MANTI-LASAL NATIONAL FOREST

UTAH AND COLORADO

SALT LAKE AND NEW MEXICO MERIDIANS

LEGEND

- NATIONAL FOREST BOUNDARY
- MAIN MOTOR HIGHWAY
- GOOD MOTOR ROAD
- POOR MOTOR ROAD
- TRAIL
- TELEPHONE LINE
- TELEPHONE LINE ALONG ROAD
- SUPERVISOR'S HEADQUARTERS
- DISTRICT RANGER STATION
- GUARD OR RANGER STATION NOT PERMANENTLY OCCUPIED
- TRIANGULATION STATION
- HOUSE, CABIN OR OTHER BUILDING
- FOREST SERVICE MONUMENT
- NATIONAL FOREST LAND

SCALE

General Location Map

Project Area

Minerals Operating Plan

1. Philip F. Gramlich and Walter Mark Gramlich
   Operators and Sub-Lessee
2. John A. Adams-Lessee
   10 Orchard Way
   Moab, Utah 84532

   George Proctor-Owner
   Box 451
   Panguitch, Utah 84759
3. La Salle Mining District
   Longshot claim
   Located in the S.E. 1/4 of Sec. 23, T. 26S., R23E. S.L.B.M.
4. Map
5. Map
6. May 1, 1986 is the tentative start up date for mining and into Nov. 1986, as weather conditions permit. April into Nov. will be the yearly mining season, until the gold bearing material that can be mined economically, is exhausted.

1. The proposed mining operation will be a placer gold operation. The gravel material will be mined with a dozer, and hauled to a wet concentrating plant with a 3 yard front end loader.

Plans are to mine and process 200 yards per day. Two water storage ponds need to be built (see map) for clear water storage, and tailings settling. The water will be brought from the North Fork of Mill Creek in a 2" pipeline to the clear water pond. A small dam will need to be built in the creek, to create a pond to divert the water. The water will be pumped from the clear water pond to the processing plant, tailings settled out, and recirculated again. The coarse tailings

1/4+ will be hauled back to the pit, and placed in the bottom as the wader goes back for another load. the fine tailings 1/4- will go into the settling pond, then pushed out of there into a pile with a dozer. the coarse tailings in the pit will be covered with the fine tailings to approx. the original contours. Any excess fine tailings will be stockpiled, and when mining is completed, will be smoothed out and reseeded.

the trees in the area are Pinyon Pine and Cedar. there is little other vegetation growing. the trees that have to be removed for mining, will be bought from the Forest Service, and piled to dry for later sale as fire wood. Care will be taken not to disturb any more vegetation than is necessary for the mining operation.

Mining in area no. 1 will start near the ponds and proceed north up the dry wash as far as gold values are economical to mine.

Some 10 yard test pits, to test select areas for mining, will be needed. If no values, pits will be sloped and reseeded. If sufficient values are found the area will be mined later. this will only be in the area of disturbance.

the present access road will need to be repaired and graded. there is a very steep place that will need to be resloped (in the original roadbed) and made less steep. Water bars will be restored to control erosion.

It will be necessary to build short stretches of road at times. When they are no longer needed, they will be blocked off and reseeded. this of course will only be done in the area of disturbance.

8. All mined areas will be smoothed and contoured. All natural drainages will be reshaped and restored. then all mined areas will be reseeded. If any new access roads need to be built, they will be blocked off and reseeded.

The maximum area to be disturbed as shown on the 7½ minute topographical map is 8¼ acres. Approx. 2 acres of this will be ponds and tailings storage area. This area has been previously disturbed years ago and was not reclaimed. As mining commences, in the event that gold values drop below what can be economically mined, then that area will be by passed to where values increase sufficiently. Test pits will show some areas to be uneconomical, so it is very likely that not more than ⅔ of the 8¼ acres will be mined.

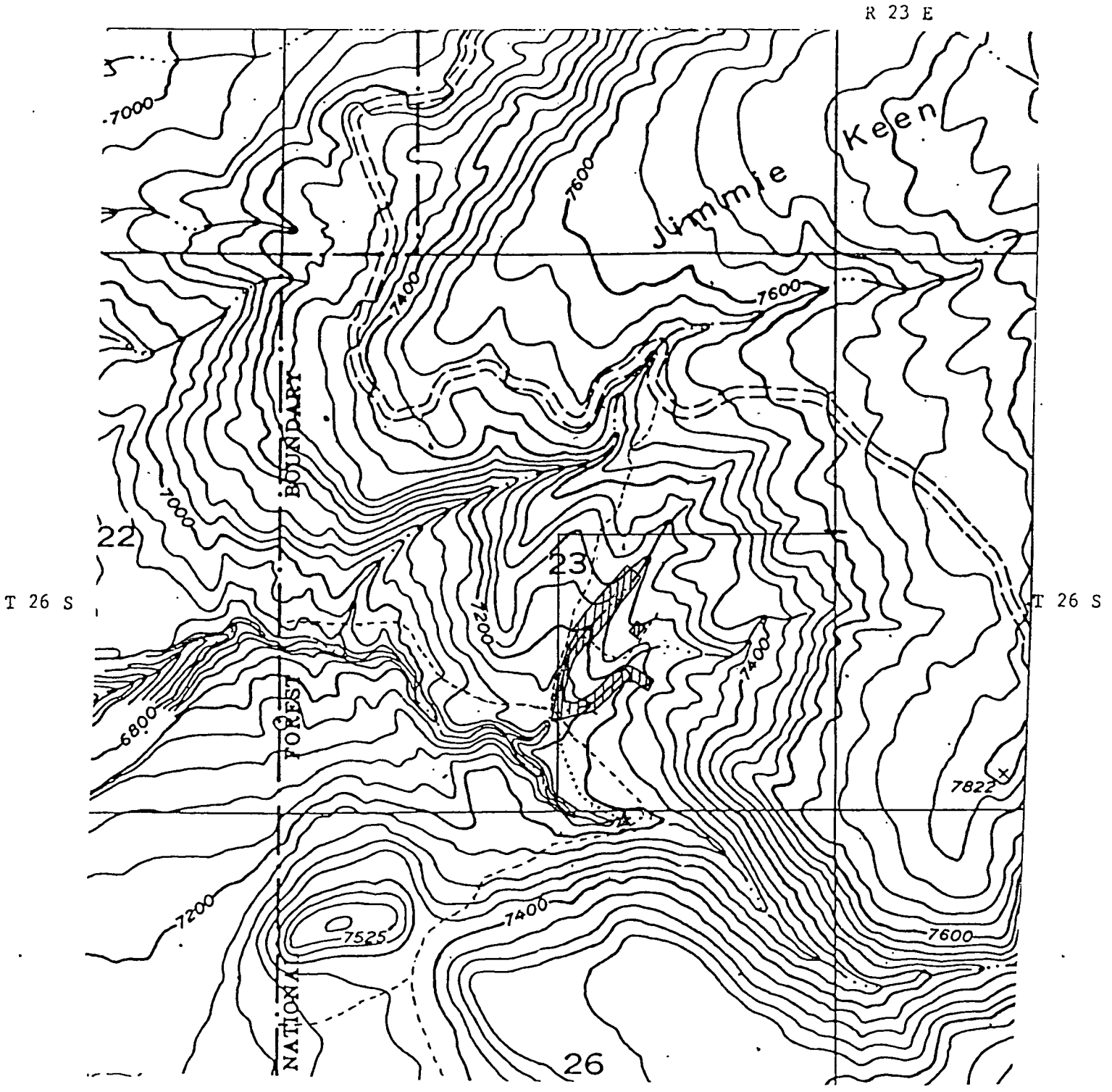
Jan. 29, 1986

Philip F. Gramlich

Natural Drainage To Creek
100'
Spillway
Clearwater Pond
Solid Rock bottom in ponds and drainage To creek
DAM
Settling Pond
Dry wash Gravel
80'
Processing Plant coarse Tailings
Pipeline To plant
Pump
2" Pipe on Surface
Water To Pond
1100'
North Fork Mill Creek
Present Road
Pump
Tank Pond

Map 4

MT. WAAS 3 SE, UTAH



EXPLANATION

North

Contour Interval 40 Feet

Scale 1:1320

0 ¼ Mile ½ Mile

Proposed Project Area

Access Road

Point of Diversion

Overland Pipeline

Long Shot Claim Boundary

MOAB RANGER DISTRICT

STANDARD MANAGEMENT REQUIREMENTS, CONSTRAINTS, AND MITIGATION MEASURES

FOR PLACER GOLD EXPLORATION

1. Approval of this Operating Plan does not constitute recognition or certification of the validity of ownership by any person named as owner herein.

2. Approval of this Operating Plan does not constitute now or in the future, recognition or certification of the validity of any of the mining claims to which it may relate nor the mineral character of the land on which it lies.

3. Changes and additions to the approved Plan of Operations must be submitted to the District Ranger for approval as a revised or supplemental plan. The revised or supplemental Plan of Operations must be approved by the District Ranger before work may begin.

4. The operator shall furnish and maintain a reclamation bond in the amount of $ 1800.00 conditioned upon compliance with the terms and conditions of approval of the Plan of Operations. (Note: Reclamation does not include fire liability or other actions in connection with the operator.)

5. Prior to bond release, a map must be furnished to the District Ranger or his designated representative showing the location and number of test pits.

   The information to be submitted for each hole encountered water should include:

   a. Test pit location.
   b. Total depth.
   c. Was ground water encountered.
   d. Name of water bearing strata.
   e. Water quality (fresh or saline).
   f. Water quantity (estimated).

6. All surface disturbing activities and operations must be supervised by a company representative knowledgeable of the terms and conditions of approval of the Plan of Operations.

7. Section corners or other survey markers within the project area must be flagged for preservation prior to commencement of surface disturbing operations. The removal, displacement, or disturbance of markers must be approved by the proper authority.

8. All surface disturbing operations must cease in the event that archaeological or cultural resources are unearthed or discovered. The District Ranger or his designated representative must be immediately notified of the situation. Operations may again commence upon Forest Service approval.

9. Harassment of wildlife and livestock is prohibited.

10. The operator is responsible for immediate repairs of any and all damages to roads, structures, and improvements, which result from his operations, at his own expense.

11. Gates and livestock fences must be kept closed unless otherwise noted.

12. Gates and/or cattleguards will be installed for access through fences.

13. All equipment and debris must be removed from the National Forest upon completion of operations. All trash and garbage must be properly disposed of at an approved refuse area. Disposal or burial of any such materials in mudpits or other areas, or by burning on the National Forest is prohibited.

14. Water must be legally obtained in accordance with State water laws.

15. Vehicle operators must maintain safe speeds commensurate with existing road traffic and weather conditions.

16. Removal of vegetation must be limited to that necessary for operations. Removal or trimming of trees must be avoided whenever possible.

17. Adequate fire suppression equipment must be readily available to employees and contractors at the project site. This will include at least one hand-held implement per man consisting of shovels and axes, and one fire extinguisher per vehicle.

18. All motorized equipment will have working mufflers and spark arrestors. Electrical equipment must be properly insulated. Vehicles equipped with catalytic converters will be parked in clear areas to avoid igniting potential fuels such as grass and brush.

19. The District Ranger or his designated representative must be notified when operations are completed, and informed as to when reclamation work will begin.

20. Mineral activities will not be allowed to interfere with the Moab Multiple Use Management Plan.

21. Where roads are constructed on the contour of slopes, and the cut is no greater than two feet, replacement to the natural slope is not advantageous. These cuts should be reclaimed as they are. For cuts greater than two feet, natural contour should be reestablished.

22. Existing roads will be used wherever possible. Unneeded roads will be re-seeded and obliterated as to Forest Service standards. Road construction, reconstructions, and repairs will be done to Forest Service specifications.

23. Mining and major road construction is not covered by this report. A site specific Environmental Assessment Report will be needed for these operations.

24. Travel on all access routes must be restricted during inclement weather. If dust becomes a problem during dry weather, the operator will be required to water access routes.

25. Reclamation practices will be designed to enhance wildlife and range use. Seeding will follow a prescription specified by the Forest Service and should occur prior to the first snowfall.

26. Postpone operations in wildlife areas during critical periods; i.e., fawning season. Stringent restrictions and reclamation requirements can be initiated and enforced.

27. Fencing of reclamation areas will be required as needed, and practical, to prevent damage to developing plants by wildlife, cattle, and human activities.

28. Postpone operations during inclement weather conditions.

29. Topsoil will be ripped and stockpiled where excavations are necessary. The soil would be spread back over the site and seeded when projects are completed.

30. Operators will pay the going rate for standard and marginal component timber that is damaged or removed for off-claim exploration activities, such as road or access construction. Under the 1872 Mining Law, operators can remove trees from valid mining claims for use in developing those claims. The Forest Service can require on-claim access routes that will avoid standard and marginal component timber. The Forest Service can also work with the operators to avoid cutting of standard and marginal timber by marking suggested trees for claim development use.

31. A small sediment containment dam will be established to collect sediment below the wash area. This sediment and all rock will be returned to the test pits established on Forest Service land.